

Pressure transmitters, High-Performance series

hex 22



- Outstanding overpressure protection (up to 4 x)
- Ideal choice for mobile hydraulic applications
- Long service life even under high pressure change rates
- Wetted parts made of stainless steel and titanium ensuring excellent media compatibility
- All welded design, no elastomeric seal
- Silicon-on-sapphire technology (SoS) for highest reliability, accuracy and reliable process monitoring
- Very low temperature error and very good long-term stability
- Customer specific solutions available on request

Technical details

Type:	0705	0710	0720
Output signal:	0.5 – 4.5 V ratiometric	0 – 10 V (3-wire)	4 – 20 mA (2-wire)
Supply voltage U_B :	5 VDC ± 10 % max. 6.5 VDC	12 – 32 VDC	10 – 32 VDC
Permissible load apparent ohmic resistance:	$\geq 4.7 \text{ k}\Omega$	$\geq 4.7 \text{ k}\Omega$	$\leq (U_b - 10 \text{ V}) / 20 \text{ mA}$
Idle power consumption:	approx. 5 mA		

Type:	0705 / 0710 / 0720									
Standard pressure ranges p_{nom} in bar:	0–10	0–16	0–25	0–40	0–60	0–100	0–160	0–250	0–400	0–600
Overpressure protection $p_u^{1)}$ in bar:	40	64	100	160	240	400	640	1,000	1,600	1,650
Burst pressure ¹⁾ in bar:	80	128	200	320	480	800	1,280	2,000	2,000	2,000
Mechanical life expectancy:	10,000,000 pulsations at rise rates to 5 bar/ms at p_{nom}									
Permitted pressure change rate:	$\leq 5 \text{ bar/ms}$									
Accuracy:	± 0.5 % full scale (FS) at room temperature, ± 0.25 % BFSL									
Long term stability:	± 0.1 % FS p. a.									
Repeatability ²⁾ :	± 0.1 % FS									
Temperature error ²⁾ :	± 0.01 % FS / °C									
Compensated temperature range:	-40 °C ... +80 °C (-40 °F ... 176 °F)									
Temperature range ambient:	-40 °C ... +100 °C (-40 °F ... 212 °F)									
Temperature range media:	-40 °C ... +125 °C (-40 °F ... 257 °F)									
Wetted parts material:	stainless steel 1.4305 / SAE Grade 303, titanium									
Insulation resistance:	$> 100 \text{ M}\Omega$ (500 VDC, $R_i > 42 \Omega$)									
Response time 10 – 90%:	$< 2 \text{ ms}$									
Vibration resistance:	20 g at 4 – 2000 Hz sine wave; DIN EN 60068-2-6									
Shock resistance:	half sine wave 500 m/s ² ; 11ms; DIN EN 60068-2-27									
Protection class	IP67 for M 12x1, DIN 72585 (bayonet) and cable connector IP65 for DIN EN 175301-803									
Electromagnetic compatibility:	EMC 2014/30/EU, EN 61000-6-2, EN 61000-6-3									
Max. length of connection cable:	30 m									
Protection against reverse polarity, short-circuit and overvoltage:	Built-in									
Weight:	approx. 80 g (DIN 175301 approx. 110 g, cable outlet approx. 135 g)									

¹⁾ Static value. Dynamic value is 30 to 50% lower. Values refer to the hydraulic/pneumatic part of the pressure transmitter / transducer.

²⁾ Within the compensated temperature range.

0705 / 0710 / 0720

Electrical connectors and threads



M 12 – DIN EN 61076-2-101 A	
0705 + 0710	0720
1: U _{v+}	1: U _{v+}
2: U _{out}	2: nc
3: Gnd	3: I _{out}
4: nc	4: nc
IP67	
x ~ 54 mm	
d ~ Ø 22 mm	
Order number: 002	

ISO 15170-A1-4.1	
	
0705 + 0710	0720
1: U _v +	1: U _v +
2: Gnd	2: nc
3: U _{out}	3: I _{out}
4: nc	4: nc
IP67, IP69K	
x ~ 65 mm	
d ~ Ø 27 mm	
Order number: 004	

	
0705 + 0710	0720
1: U_{out}	1: nc
2: Gnd	2: I_{out}
3: U_v+	3: U_v+
IP67	
$x \sim 73 \text{ mm}$	
$d \sim \varnothing 26 \text{ mm}$	
Order number: 007	

* without coupler socket $x \sim 60$ mm, with coupler socket $x \sim 76$ mm

DEUTSCH DT04-4P

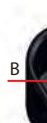
0705 + 0710	0720
1: Gnd	1: I _{out}
2: Uv+	2: Uv+
3: nc	3: nc
4: U _{out}	4: nc

IP67, IP66K9K

x ~ 74 mm

d ~ Ø 23 mm

Order number: 008

DEUTSCH DT04-3P	
	
0705 + 0710	0720
A: U _v +	A: U _v +
B: Gnd	B: nc
C: U _{out}	C: I _{out}
IP67, IP6K9K	
x ~ 74 mm	
d ~ Ø 23 mm	
Order number: 010	

Cable connection	
	
0705 + 0710	0720
1: U _v +	1: U _v +
2: U _{out}	2: nc
3: Gnd	3: I _{out}
IP67	
x ~ 44 mm (+ 20 mm bend relief) Cable length ~ 2 m	
d ~ Ø 22 mm	
Order number: 011	

Viton®-
Sealing ring

G 1/4 DIN
EN ISO 1179-2
(DIN 3852-11) form E

Thread code: 41

Technical drawing of a plug valve handle. The drawing shows a hexagonal head with a diameter of 2 and a threaded stem with a length of 12. The thread specification is G1/4 DIN 3852-A.

Thread code: 03

Thread code: 04

Technical drawing of a hex bolt. The drawing shows a side view of the bolt with a hexagonal head and a threaded shank. A dimension line indicates the height of the hex head is 14.5. Below the bolt, the text "Thread code: 09" is displayed.

Technical drawing of a hexagonal bolt. Dimensions shown: 2 (hex head height), 8 (thread length). Thread specification: M 10x1 DIN 3852-A.

Thread code: 30

Technical drawing of a bolt with dimensions: 1 (hex head height), 9,14 (thread length), and 7/16-20 UNF (thread specification).

Thread code: 20

Technical drawing of a hex bolt. The drawing shows a hexagonal head and a threaded shank. Dimension lines indicate a head height of 2.3 and a shank length of 9.93. The thread specification is 9/16-18 UNF.

Thread code: **21**

 Viton®
Sealing ring
M14x1,5
DIN EN ISO 9974-2
(DIN 3852-11) form B

Thread code: 42

0705 / 0710 / 0720

Order matrix for pressure transmitters

T.4

hex 22
High-Performance



	Type	Pressure range	Pressure connection	Seal material	Electrical connection
0.5 – 4.5 V, ratiometric	0705				
0 – 10 V, 3-wire	0710				
4 – 20 mA, 2-wire	0720				

Pressure range	Max. overpressure ¹⁾	
0 – 10 bar (approx. 145 PSI)	40 bar	101
0 – 16 bar (approx. 232 PSI)	64 bar	161
0 – 25 bar (approx. 362 PSI)	100 bar	251
0 – 40 bar (approx. 580 PSI)	160 bar	401
0 – 60 bar (approx. 870 PSI)	240 bar	601
0 – 100 bar (approx. 1,450 PSI)	400 bar	102
0 – 160 bar (approx. 2,320 PSI)	640 bar	162
0 – 250 bar (approx. 3,620 PSI)	1000 bar	252
0 – 400 bar (approx. 5,800 PSI)	1600 bar	402
0 – 600 bar (approx. 8,700 PSI)	1650 bar	602

Pressure connection	
G 1/4 – DIN 3852-E	41
G 1/4 – DIN 3852-A	03
NPT 1/8 (max. to 250 bar)	04
NPT 1/4	09
M 10 x 1 cyl. DIN 3852-A (max. to 250 bar)	30
7 / 16 – 20 UNF (max. to 250 bar)	20
9 / 16 – 18 UNF	21
M 14 x 1.5 – DIN 3852-E	42

Pressure unit	
bar	B
PSI	P

Electrical connection	
DIN EN 175301-803-A (DIN 43 650-A) ; socket device included	001
M 12 – DIN EN 61071-2-101 D	002
Bayonet ISO 15170-A1-4.1 (DIN 72585-A1-4.1)	004
AMP Superseal 1,5*	007
Deutsch DT04-4P	008
Deutsch DT04-3P	010
Cable connection (length of cable 2 m standard)	011

Order number:	07XX	XXX	XX	X	XXX
---------------	------	-----	----	---	-----

¹⁾ Static pressure, dynamic pressure 30 to 50% lower. Values refer to the hydraulic or pneumatic part of the pressure transmitter.

